GENERAL INDEX TO VOLUME XXIII

New scientific names of plants and the final members of new combinations are printed in bold face type; synonyms and page numbers having reference to figures and plates, in italics; and previously published names and all other matter, in ordinary type.

Acremonium kiliense, 40 Acrotheca Pedrosoi, 543, 544, 545, 546 547

Akinetes in Gliocladium, 20

Allescheria, 37; Boydii, 38, on various media, 20, 56, 58, 68
Almeida, Floriano Paulo de, Morris

Moore and. New organisms of Chromomycosis, 543

Amphidiploidy, 472 Anderson, Edgar. An experimental study of hybridization in the genus

study of hybridization in the genus Apocynum, 159; Hybridization in American Tradescantias, 511; The species problem in Iris, 457
Andrews, Henry N. Jr. A new Sequoioxylon from Florissant, Colorado, 439; J. A. Moore and. Transitional pitting in tracheids of Psilotum, 151
Apocynaceae, Studies in the, IV. The

American Genera of Echitoideae, 1691 Apocynum: An experimental study of hybridization in the genus, 159; results of progeny tests with certain species of, 162

Apocynum androsaemifolium, 159 161, 168; cannabinum, 159, 161, 168; hypericifolium, 159; medium, 159, 161, 168; venetum, 163

Aquilegia Jonesii, 450

Arborella, 562; Calverti, 562; Kohli, 562, 564

Arcangeliella, and Macowanites, Elas-

momyces, 599

Arcangeliella, 602; africana, 614; alveolata, 608, 620; ambigua, 610; asterosperma, 631, var. depauperata, 634, var. hololeuca, 634; australiensis, 625; Beccari, 635; Behrii, 615, var. caudata, 616; Borziana, 628; brunneola, 617; Campbellae, 613; caudata, 616; cremea, 628; Curtisii, 612; ellipsoidea, 610; Gardneri, 611; gla-brella, 608; krjukowensis, 626, var.

michailowskjana, 627; laevis, 579; luteocarnea, 570; nana, 609; occidentalis, 629; pilosa, 619; Ravenelii, 622; rosea, 630; scissilis, 624; seminuda, 617; socialis, 623; Soderstroemii, 630; Stephensii, 613; tasmanica, 624; violacea, 608; vulvaria, 629

Argylium, 640; inquinans, 653; liquaminosum, 642

Arthurella, 559; Corringtoni, 559, 564 Ascogonia in Hyphomycetes, 20 Aspergilleae, conidial production in, 5 Asterogasteraceae, 565 Azaleastrum Warrenii, 453

Baker, Gladys E. A study of the genus Helicogloea, 69

Baragwanathia longifolia, 153

Blakeslea trispora Thaxter, The effect of environment upon the production of sporangia and sporangiola in, 527, 542

Blastodendrion, 138; Flareri, 143; Pinoyi, 145

Blood agar, nutrient, growth of Syringospora inexorabilis on, 134

Blood serum; growth of certain Hyphomycetes on, 68, of Syringospora inexorabilis on, 135

Bondatia oleodora, 648

Botrytoides, 544; spectabilis, 46 Botrytoides, 544, 545, 550; monophora, 544, 546, 552

Bullardia inquinans, 653 Bullardia, 640

Campsotrichum, 546 Candida dendritica, 145; desidiosa, 145; insolita, 142 Carbohydrate reactions of Syringospora inexorabilis, 135

The taxonomic entities in this work are indexed on pages 407-424 of this volume of the Annals and will not be repeated here.

Carpenteles, 5

Carrot plug, growth of certain Hypho-

mycetes on, 20

Castellania macedoniensis, 141 Centrosomes in Hyphomycetes, 9

Cephalophores in Hyphomycetes, 5, 50 Cephalosporium and some related Hyphomycetes, A comparative study of

conidial formation in, 1

Cephalosporium, 38; Acremonium, 40; asteroides griseum, 40; kiliense, 40, on various media, 20, 58, 68; niveolanosum, 41, on various media, 20, 58, 68; rubrobrunneum, 39, on various media, 20, 58, 68; rubrobrunneum cerebriforme Hartmanni, 39; Serrae, on various media, 20, 58, 68; Stuehmeri, 40, on various media, 20, 58, 68; symbioticum, 42, on various

media, 20, 58, 60, 68 Chlamydospores in Hyphomycetes, 19 Chondriosomes in Syringospora inexor-

abilis, 137

Chromoblastomycosis, 543

Chromomycosis, New organisms of, 543 Chromosome numbers: in Iris versi-color, 474, 476; in I. virginica, 474, 475; in I. virginica var. Shrevei, 475

Cladochytriaceae, New genera of, 553 Clathrogaster Beccari, 635; vulvarius, 629

Clonostachys, 43; Araucaria, 43, 44, on various media, 20, 56, 66, 68, var. confusa, 44, on various media, 56, 64, 68, var. rosea, 44, on various media, 20, 64, 68; spectabilis, 46, on various media, 66 Colorado, A new Sequoioxylon from, 439

Conchyliastrum, 560; Enderi, 557, 560,

564; Merritti, 561, 564

Conidial apparatus in some Hyphomycetes, 5 Conidial formation in Cephalosporium

and some related Hyphomycetes, A comparative study of, 1

Corn-meal agar: growth of certain Hyphomycetes on, 20; of Syringospora inexorabilis on, 133 Coulterella, 556; Petersoni, 557, 564

Cryptococcus rubrorugosus, 49

Czapek's agar: growth of certain Hyphomycetes on, 20, 68; of Syringospora inexorabilis on, 132

Dalea Grayi, 450; laevigata, 450; Thompsonae, 451 Dermatitis verrucosa, 543

Dodge, Carroll W.: and Morris Moore. Morphology, physiology and cytology of Syringospora inexorabilis (Mon-ilia inexorabilis), 129; and Sanford M. Zeller, Hydnangium and related genera, 565; Sanford M. Zeller and. Elasmomyces, Arcangeliella and Macowanites, 599; Melanogaster, 639

Dodgella, 554; inconstans, 555, 564; priscus, 554, 564; radicatus, 556, 564 Downingia brachyantha, 455

Dryas Drummondii var. tomentosa. 452; grandis, 452; Hookerianum, 452; octopetala, 452; tomentosa, 452

Echitoideae of Apocynaceae, The American genera of, 169

Elasmomyces, Arcangeliella, and Ma-cowanites, 599 Elasmomyces, 600; borneensis, 600; echinosporus, 601; Mattirolanus, 600, 602; michailowskjanus, 627; russuloides, 620; sessilis, 626

Endo's agar: growth of Syringospora inexorabilis on, 133; growth of growth of Blakeslea trispora on, 530, 537

Environment, The effect of, upon the production of sporangia and sporangiola in Blakeslea trispora Thaxter, 527

Evolutionary patterns of the genus Iris, 499

Field and herbarium studies. IV, 447 Flags, northern blue: intra-specific dif-ferentiaton in the, 485; phylogenetic relationships in, 499, 501; taxonomy of the, 459

Florissant, Colorado, fossil trees at, 439, 444, 446

Fossil plants, 439

Freezing, effect of, on sporangial types in Blakeslea trispora, 539

Fuchsin, basic, effect of, on sporangial types in Blakeslea trispora, 537 Fungi Imperfecti and sexuality, 31

G

Gautieria, 611 Gliocladium, 46; deliquescens, 47, on various media, 20, 62, 68; fimbriatum, 46, on various media, 20, 62, 68; penicilloides, 48, 56, 62, 68; roseum,

44; Vermoeseni, 47, on various media, 20, 64, 68

Glycerine agar: effect of various pH of, on growth of certain Hyphomycetes, 23; growth of certain Hyphomycetes on, 20, of Syringospora inexorabilis on, 134

Glycogen in Syringospora inexorabilis, 137

Goldring, David. The effect of environment upon the production of sporangia and sporangiola in Blakeslea trispora Thaxter, 527

Golgi apparatus in Hyphomycetes, 11 Gomphinaria Pedrosoi, 544, 547 Gorodkova-Maneval medium, growth of

certain Hyphomycetes on, 20 Granules, occurrence of, in certain Hy-

phomycetes, 35 Gymnomyces, 603; flavus, 625; Gard-neri, 611; pallidus, 620; † solidus, 620; seminudus, 617

Gymnomyces vesiculosus, 634

H

Helicogloea, A study of the genus, 69 Helicogloea, 69; caroliniana, 92, mor-phology of, 126; intermedia, 91, morphology of, 126; Lagerheimi 71, 92, eytological observations of, 77, morphology of, 72, 114, 116, 118, 120, 122, 124, 126, 128, taxonomic considerations, 88; pinicola, 89, morphology of, 126, f. alniviridis, 90,

Herbarium studies, Field and, 447 Heterothallism, relation of, to origin of Hyphomycetes, 32

Hoffmanseggia drepanocarpa, 451; tenella, 451

Hormodendroides, 544, 547, 550; Pedrosoi, 544, 547

Hormodendron, 547, 550; compactum, 544; Pedrosoi, 543, 544, 546, 547

Hormodendrum compactum, 549 Humidity, effect of, on sporangial types in Blakeslea trispora, 535

Hybridization: in the American Tradescantias, 511; in the genus Apocy num, An experimental study of, 159, 168; in species of Iris, 474 Hybrids, method for measuring species,

Hydnangiaceae, 565

Hydnangium and related genera, 565 Hydnangium, 574; album, 581; Archeri, 586; asterospora, 632; aurantiacum, 586; aurantium, 588; australiense, 625; brisbanense, 626; candidum, 570; carneum, 575, 582, var. pur-pureum, 584; carotaecolor, 586; caroticolor, 597; cereum, 595; citrinum, 577; Clelandi, 596; compactum, 580; compactum, 573; densum, 593; Eisenii, 578; galathejum, 614; Gilkeyae, 581; glabrum, 620; Hessei, 590; Hinsbyi, 620; hysterangioides, 569; javanicum, 592; laeve, 579; lanig-erum, 591; liospermum, 572; luteo-lum, 585; luteum, 594; McAlpinei, 617; microsporium, 596; mistiforme, 588; monosporum, 587; monticola, 578; Mouchettii, 594; nigricans, 592; pallidum, 630; Parksii, 580; 582; purpureum, 589, 606; pusillum, 585; Ravenelii, 612, 622; Soderstroemii, 630; Soehneri, 595; Stephensii, 613, var. Ravenelii, 622; tasmanicum, 624; Thaxteri, 589; tubervuletum, 503 berculatum, 593

Hydrogen ion concentration of media; effect of, on sporangial types in Blakeslea trispora, 539; relation of, to growth of certain Hyphomycetes, 21, of Syringospora inexorabilis, 132 Hymenogaster, 640; Behrii, 615; Campbellii, 613; nanus, 609; violaceus,

Hymenogasteraceae, 565 Hyperrhiza, 640; aurea, 654; caroliniensis, 655; inquinans, 653; liquaminosa, 642; odoratissima, 652; rubescens, 648; sarcomelas, 652; tuberiformis, 645; tuberosa, 654; variegata, 651

Hyphomycetes: A comparative study of conidial formation in some, 1; conidial apparatus in, 5; pathogenicity of, 34; physiology of, 20; sexuality in, 31; taxonomy and morphology of, 37

Hypochnus terrestris, 98

Intra-specific differentiation northern blue flags, 485

Iris: evolutionary patterns of the genus, 499; intra-specific differentiation in, 485; phylogenetic relationships of, 471; The species problem in, 457;

taxonomy of, 459

Iris, 457; arctica, 460; carolina, 464; caroliniana, 464; foetidissima, 500; foliosa, 500; fulva, 500; georgiana, 464. 464; Hookeri, 461; missouriensis, 500; prismatica, 500; pseudacorus, 467, 500; setosa, 457, 460, range of, 460, seeds of, 470, var. canadensis, 461, var. interior, 462; Shrevei, 469; versicolor, 457, 463, chromosome numbers in, 474, 476, phylogenetic relationship of, 471, range of, 464, seeds of, 470; virginica, 464, chromosome numbers in, 474, phylogenetic relationship of, 471, range of, 465, var. Shrevel, 469, area in Michigan occupied by, 487, chromosome numbers in, 474, 475, flowers of, 486, range of, 465, seeds of, 470

L

Lactose agar: growth of certain Hyphomycetes on, 20, of Syringospora inexorabilis on, 134

Laubertia, 370 Leucophlebs Clelandi, 596

Light: effect of, on sporangial types in Blakeslea trispora, 539; polarized, study of certain Hyphomycetes under, 31

Lycoperdoides tuberosum, ferrugineum, arrhison, pulpa nigra, 654 Lycoperdon Gunnii, 596 Lycogalopsis, 565

M

Maccagnia, 573; carnica, 573, 574 Macowania, 636 Macowania, 636; agaricina, 636 Macowanites, Elasmomyces, Arcangeliella and, 599

Macowanites, 636; agaricinus, 593, 636; echinosporus, 601; magnus, 637

Malt extract agar, growth of Syringo-spora inexorabilis on, 132 Martellia, 575; mistiformis, 575, 588

Measuring species hybrids, a method for, 512

Media: effect of, upon sporangia pro-duction in Blakeslea trispora, 529, 531; growth of certain Hyphomycetes on various, 20, 56, 68, of Syringospora inexorabilis on, 132

Medical aspects of certain Hyphomycetes, 34; of Syringospora inexorabilis, 129

Melanogaster, 639; ambiguus, 642, var. euryspermus, 643; aureus, 654; ambiguus var. intermedius, 645; Broomeianus, 647, 654; carolinensis, 655; durissimus, 650; Eisenii, 579; intermedius, 645; † Klotzschii, 642; macrosporus, 644; microsporus, 646; mollis, 650; nauseosus, 648; odoratissimus, 652; Parksii, 649; rubescens, 648; sarcomelas, 652; tuberiformis, 645, 652; tuberosum, 654; variegatus, 651; variegatus var. Broomeianus, 647; Wilsonii, 655 Microseris nigrescens, 455

Moisture, effect of, on sporangial types in Blakeslea trispora, 535

Monilia inexorabilis, 129, 139; doniensis, 141; zeylanoides, 144 Moore, John Adam, and Henry N. An-

drews, Jr. Transitional pitting in tracheids of Psilotum, 151

Moore, Morris, Carroll W. Dodge and. Morphology, physiology and cytology of Syringospora inexorabilis (Monilia inexorabilis), 129; and Floriano Paulo di Almeida. New organisms of Chromomycosis, 548

Morphology, physiology, and cytology of Syringospora inexorabilis (Monilia inexorabilis), 129

Myceloblastanon macedoniense, 141 Mycocandida, 138

Mycoderma desidiosum, 145

Mycotorula, 138; albicans, 139 morpha, 140; interdigitalis, macedoniensis, 141; trimorpha, 139; di-142; verticillata, 143; seylanoides, 144 Mycotoruloides, 138; macedoniensis, 141; trimorpha, 142

Nemophila breviflora, 454; parviflora, 454; petrophila, 453

Nitrate media, growth of various Hyphomycetes on, 20

Nourishment, effect of, on sporangial types in Blakeslea trispora, 535, 542 Nutrient agar and broth, growth of Syringospora inexorabilis on, 133, 134

Nutrients, relation of, to growth of certain Hyphomycetes, 26

Octaviana, 603; africana, 614 Octaviania, 575, 602, 603, 640; africana, 614; alveolata, 620; ambigua, 642; Archeri, 586; asterosperma, 575, 631, var. depauperata, 634, var. hololeuca, 634; asterospora, 632; aurea, 654; australiensis, 625; borneensis, 600; brunnea, 632; brunneola, 617; carnea, 583; caroticolor, 597; citrina, 577; compacta, 569, 573; galatheja, 614; Hesseana, 591; hysterangioides, 569; laevis, 579; lanigera, 591; levis, 579; 572; lutea, 594; luteo-70; microsporium, 617; liosperma, carnea, 570; microsporium, 611; mollis, 583; monospora, 587; monti-570;

cola, 578; mutabilis, 591, 632; oc-

cidentalis, 629; odoratissima, 652; pallida, 630; purpurea, 590; Ravenelli, 622; rosea, 630; rubescens, 648; sarcomelas, 652; socialis, 623; Stephensii, 613, var. nuda, 620, var. Ravenelli, 622; Stillingenri, 630; tasmanica, 624; tuberculata, 593; vacua, 634; variegata, 651

Octavianina, 603, alveolata, 620; Archeri, 586; asterosperma, 632; brunnea, 632; compacta, 573; Hessei, 590; laevis, 579; lanigera, 591; mollis, 583; mutabilis, 632; rosea, 630; Stephensii, 613; tuberculata, 593

Oidia in Hyphomycetes, 20

Oidium albicans, 138

Oxygen relationships, relation of, to growth of certain Hyphomycetes, 25

P

Paeonia Brownii, 449
Paramoeciella, 558; Gamblei, 558, 564
Parendomyces Flareri, 143
Parosela Grayi, 450; Thompsonae, 451
Pathogenic fungi, 34, 129
Pedicularis cystopteridifolia, 455;
Hallii, 450; scopulorum, 455
Penicillium, 5; brevicaule, 49; roseum,
44; Vermoeseni, 47
Penstemon aridus, 455; Caryi, 455

Peptone agar, growth of Blakeslea trispora on, 530 Petal and sepal sizes in species of Iris,

488, 489, 490, 491, 492, 493, 505 Phallobata, 611

Phallogaster, 611 Phialides in Hyphomycetes, 13

Phialoconidiophora, 544, 547, 550; compactum, 544, 549; Guggenheimia, 544, 548, 552

Phialophora, 544, 547, 550; macrospora, 544, 545, 552; verrucosa, 543, 544, 545, 546

Phylogenetic relationships; of Iris versicolor and Iris virginica, 471; of species of Apocynum, 165

Picea pungens, 447
Pigments in certain Hypnomycetes, 28
Pinkerton, M. Elizabeth. A comparative study of conidial formation in Cephalosporium and some related Hyphomycetes, 1

Pitting: transitional, in tracheids 440, 444; of Psilotum, 151, 156, 158; in tracheids of Sequoioxylon Pearsalii, 440, 444

Polarized light, study of certain Hyphomycetes under, 31 Pollen fertility in species of Apocynum, 161

Polysaccum tuberosum, 654 Populus taccamahacca, 449

Potato decoction, growth of Blakeslea trispora on, 533, 537

Potato dextrose, growth of Blakeslea trispora on, 530, 532, 537, of certain Hyphomycetes on, 20, of Syringospora inexorabilis on, 133

Primula floribunda, 471, 472; kewensis, 471, 472; verticillata, 471, 472

Progeny tests in Apocynum, results of, 160, 162

Pseudomonilia verticillata, 143; zeylanoides, 144

Psilotum, transitional pitting in tracheids of, 151, 156, 158; nudum, 152, 156, 158; triquetrum, 152

R

Ranunculus jovis, 450
Raulin's solution, growth of Syringospora inexorabilis on, 132
Rhizopogon rubescens, 646; Wilsonii,
655
Rhizopogon aurantius, 588
Rhododendron Warrenii, 453
Rhodotorula mucilaginosa, 49, var. rubrorugosa, 49
Russulaceae, 565

8

Sabouraud's agar: growth of certain Hyphomycetes on, 20, of Syringospora inexorabilis on, 129, 133

Saccoblastia, 69; caroliniana, 92; graminicola, 90; intermedia, 91; ovispora, var. caroliniana, 92; pinicola, 89; sebacea, 93, var. vulgaris, 93, var. pruinosa, 93

Saccogloea, 88
Salix arctica, 448; cascadensis, 448;
Tweedyi, 448

Sclerogaster, 566; Broomeianus, 569; candidus, 570; compactus, 573; hysterangioides, 569; lanatus, 568; lanatus, 571; liospermus, 572; luteocarneus, 570; minor, 572; pacificus, 568; siculus, 571

Secotium sect. Elasmomyces, 600; krjukowense, 626; Mattirolanum, 602; michailowskianum, 627; sessile,

Senecio, 456; filifolius Fremontii, 456; Harbourii, 456; spartioides var. Fremontii, 456 Sepal and petal width in species of Iris, 488, 489, 490, 491, 492, 493, 505

Sequoia, 439; Penhallowii, 442; sempervirens, 442

Sequoioxylon, A new, from Florissant, Colorado, 439

Sequoioxylon, 439; Pearsalii, 440, anatomical drawings, 441, 444, 446 photograph of stump, 444, radial longitudinal view of ray, 441, resin canals, 440, tracheids, 440, wood parenchyma, 440, wood rays, 440
Sexuality: in Helicogloea, 98; Fungi

Imperfecti and, 31

Species problem in Iris, The, 457 Splanchnomyces Behrii, 615

Sporangia and sporangiola, The effect of environment upon the production in Blakeslea trispora Thaxter, 527, 542

Stephanospora, 597; caroticolor, 597 Studies in the Apocynaceae, IV. ican genera of Echitoideae, 169

Sugars, effect of various, on growth of Syringospora inexorabilis, 135; upon sporangia production in Blakeslea trispora, 332

Surface tension: in Hyphomycetes, 10; relation of, to growth of certain Hy-

phomycetes, 24 Syringospora inexorabilis (Monilia inexorabilis), Morphology, physiology and cytology of, 129

Syringospora albicans, 139; Braulti, 139; dimorpha, 140; inexorabilis, 139, cytology of, 135, growth of, on various media, 148, 150; Robinii, 138

Temperature, effect of, on sporangial types in Blakeslea trispora, 538 Thallophytes, new, 553

Thermopsis, 450; annulocarpa, 450; arenosa, 450; rhombifolia var. annulo-carpa, 450

Thornbera Grayi, 450 Torula mucilaginosa, 49

Torulopsis, 49; mucilaginosa, 1, 49, 60; rosea, 49

Tracheids: in Sequoioxylon Pearsalii, 440, 444, 446; of Psilotum, transitional pitting in, 151, 156, 158

Tradescantia: canaliculata, 515, dis-tribution of, 518, 519, hybridization between T. virginiana and, 515; virginiana, distribution of, 518, 519,

hybridization between, and T. canaliculata, 515

Tradescantias, Hybridization in American, 511

Trichosporium Pedrosianum, 543, 546, 547; Pedrosoi, 543, 544, 546, 547 Trichosporon (Geotrichoides) dendriticum, 145

Tuber moschatum, 647, 651

Uperhiza, 640, 655; carolinensis, 655 Uperrhiza, 640; Boscii, 655

Vacuoles: in Hyphomycetes, Syringospora inexorabilis, 137 Volutin in Syringospora inexorabilia, 137

Williams, Louis, O. Frium studies, IV, 447 Field and herba-

Woodson, Robert E. Jr., Studies in the Apocynaceae IV. The American Genera of Echitoideae, 169

Wort agar, growth of Syringospora in-exorabilis on, 132

Xerophyllum tenax, 449

Y

Yeasts, imperfect: cytology of, 135; systematic position of, 138 Yeast-dextrose agar, growth of Syringospora inexorabilis on, 134

Z

Zauschneria Garrettii, 452; latifolia var. Garrettii, 452

Zebrowski, George, New genera of Cla-

dochytriaceae, 553 Zeller, Sanford M., and Carroll W. Dodge. Elasmomyces, Arcangeliella and Macowanites, 599; Melanogaster, 639; Carroll W. Dodge and. Hydnangium and related genera, 565

129; capsulatum, Zymonema, dermatitidis, 129

